

pecially good for armor crews, enabling them to function more freely. With it, these crews would not have to squeeze into tanks wearing bulky and hot NBC suits.)

The SSD also represents the user on a Department of Defense working group that evaluates clothing and textile items for potential joint service use and oversees the Soldier Enhancement Program (SEP). SEP is an initiative aimed at acquiring items that are commercially available.

A DIGITAL COMPASS SYSTEM for the Bradley fighting vehicle is to be produced under a recently awarded contract. The contract calls for the integration of a unique electronic compass technology with the Army's new precision

lightweight global positioning system (GPS) receiver (PLGR) to produce compasses for the Army's fleet of Bradleys.

One benefit of this compass is its ability to overcome the severe magnetic deviation created by the armor on the vehicle. Another benefit is its ability to interface with the Bradley's PLGR system receiver and tactical computers.

In the Bradley, simple customized displays will interface with the GPS to show the driver and the commander all the navigation information they need. The GPS pinpoints the vehicle's current location within meters, anywhere on earth. The compass provides critical steering and pointing information to help keep the vehicle crew oriented on the battlefield and allow them to steer quickly to their destination. If the external GPS signals

are blocked or neutralized, the compass can automatically calculate the vehicle's latest position by dead reckoning. All information is immediately available digitally in order to communicate with the other electronics on the vehicle, or to be transmitted to mission planners or other vehicles to facilitate synchronized operations.

The fleet of Bradleys to be equipped with these digital compasses will be part of an Army program to improve Bradley capabilities on the basis of lessons learned from the Persian Gulf War in 1991.

During Operation DESERT STORM, it was discovered that U.S. military units, trained to confront Warsaw Pact forces on well-surveyed European terrain, were not prepared to navigate in the desert. To determine direction, armored vehicle

## BRADLEY CORNER

THE BRADLEY PROPONENCY Office in the 1st Battalion, 29th Infantry, at Fort Benning publishes Bradley fighting vehicle and Stingray training and field manuals, and also provides subject matter experts to assist in related developments. The office is working on several projects and welcomes comments from the field on them:

Change 1, Field Manual (FM) 23-1, *Bradley Fighting Vehicle Gunnery*, should reach the field by January 1994; and Student Handout (SH) 23-1, *Interim Publication for Bradley-equipped Echo Companies*, by February 1994.

The FM 23-1 change includes a threat-based gunnery methodology, the point-calculation worksheet. After the change is distributed to units, an 18-month transition period will be in effect. During this time, unit commanders will score their gunnery tables using both the new worksheets and the current matrices for qualification scoring and for reporting and evaluating their progress toward National Training Center (NTC) gates (requirements that must be met before NTC rotations).

Units are asked to send the proponency office all the accumulated data from

their gunneries—such as the engagement times for each target and the ranges to the targets—so that any necessary corrections can be made before the complete revision of FM 23-1, which is planned for 1995.

This change also incorporates Bradley Gunnery Skills Test (BGST) Task 19 (Vehicle Identification). Thirty mandatory vehicle slides and an initial list of vehicles for the tasks were mailed in May 1993 to the division master gunners in Bradley-equipped divisions. That initial list has since been reviewed by the Infantry School's Foreign Analysis Division, and some changes are expected. A revised list will be sent to the master gunners when it is completed.

Meanwhile, the Bradley Proponency Office needs assistance in locating unclassified photographs of the vehicles listed so the best possible images can be incorporated. These photos will then be reproduced and distributed by the U.S. Army Training Support Center.

SH 23-1 will lay out the Infantry School's intent on the initial training strategy for the proposed MOS 11HD3 (Bradley-qualified heavy antiarmor infantryman), along with the Echo com-

pany gunnery training strategy.

Other new Bradley developments include the following:

- The M919 APFSDS-T (armor-piercing fin-stabilized discarding sabot-training) round, which was type-classified in September 1993.

- The Rock Island cannon bore erosion gauge, which is now available. The gauge allows master gunners to check the remaining life of their 25mm gun barrels. The correct number for ordering the gauge is NSN 5210-01-329-4860; the cost is \$25.54; and the authority for requisitioning the gauge is TM 9-1005-200-20&P.

Also under development are BFV/Stingray training devices such as the Thru-Sight Video, the Close Combat Tactical Trainer, the Advance Gunnery Training System, and the Precision Gunnery System.

To obtain additional information on any of these projects, or to offer comments, units may write to Commander, 1st Battalion, 29th Infantry, ATTN: ATSH-INA-BPO, Fort Benning, GA 31905; or call DSN 784-6201/6136, commercial (706) 544-6201/6136.